IN THE CLAIMS:

Please AMEND the claims as follows:

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1.   (Currently Amended) A method of providing replacement functions for a set of system services, comprising:

sending a request for ~~requesting~~ a primitive function from one of the set of system services to another one of the set of system services, the primitive function replicating the one of the set of system services in a manner such that implementation of the primitive function reduces or eliminates reliance on one or more system functions capable of becoming non-functional in the event of a system error ~~with reduced functionality~~; and

~~sending~~ receiving an identifier associated with the requested primitive function ~~from~~ at the one of the set of system services from another one of the set of system services, thereby enabling the one of the set of system services to call the primitive function via the identifier associated with the requested primitive function.

2.   (Currently Amended) The method as recited in claim 1, wherein sending a request for a primitive function and ~~sending~~ receiving the identifier associated with the requested primitive function is performed only when the one of the set of system services performs a debugging function.

3.   (Currently Amended) The method as recited in claim 1, wherein sending a request for a primitive function and ~~sending~~ receiving the identifier associated with the requested primitive function is performed only when the one of the set of system services performs at least one of an input and an output function.

4.   (Currently Amended) A method of providing replacement functions for a stack of system services, the stack of system services including one or more layers, each layer representing one of the system services, wherein lower layers provide services to upper layers in the stack, the method comprising:

sending a primitive function request for a primitive function down from one of the layers of the stack of system services to another one of the layers in the stack of system

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services, the primitive function replicating the system service associated with the one of the layers in the stack;

when the <u>another</u> one of the layers is responsible for performing at least one of input and output, returning a primitive function identifier associated with the primitive function <u>to the one of the layers of the stack of system services</u>.

5.   (Currently Amended) The method as recited in claim 4, further comprising:

when the <u>another</u> one of the layers is responsible for performing at least one of input and output, sending another primitive function request from the <u>another</u> one of the layers in the stack <u>of system services</u> to a lower layer in the stack <u>of system services</u>.

6.   (Original)   The method as recited in claim 4, further comprising:

propagating the primitive function request down the one or more layers of the stack of system services.

7.   (Currently Amended) A method of providing replacement functions for a stack of system services, the stack of system services including one or more layers, each layer representing one of the system services, wherein lower layers provide services to upper layers in the stack, the method comprising:

sending a primitive function request <u>for a primitive function</u> down from a first one of the layers in the stack <u>of system services</u> to a second one of the layers in the stack <u>of system services</u>, the primitive function replicating the system service associated with the second one of the layers in the stack <u>of system services in a manner such that implementation of the primitive function reduces or eliminates reliance on one or more system functions capable of becoming non-functional in the event of a system error</u>;

returning primitive function information associated with the primitive function to the first one of the layers; and

storing the primitive function information to enable the first one of the layers in the stack <u>of system services</u> to communicate with the <u>primitive function associated with the</u> second one of the layers in the stack <u>of system services</u>.

8.   (Original)   The method as recited in claim 7, wherein the primitive function information includes a pointer to the primitive function.

9.   (Original)   The method as recited in claim 7, wherein the primitive function information includes state information data to be provided to the primitive function when the primitive function is called.

10.   (Original)   The method as recited in claim 7, further comprising:
        repeating the sending, returning, and storing steps over multiple layers of the stack such that a stack of primitive mechanisms parallel to the stack of system services is assembled.

11.   (Original)   The method as recited in claim 7, wherein the returning and storing steps are performed when the second one of the layers in the stack contributes to at least one of input and output.

12.   (Original)   The method as recited in claim 7, wherein the returning and storing steps are performed when the second one of the layers in the stack contributes to debugging functions.

13.   (Currently Amended) A system for providing replacement system functions, comprising:
        a set of components providing a set of services;
        a set of primitive functions associated with the set of services, the set of primitive functions replicating the set of services, wherein each of the set of primitive functions eliminates or reduces reliance on one or more system functions that are capable of becoming non-functional in the event of a system error~~with reduced functionality~~; and
        a primitive function request mechanism adapted for returning one or more identifiers associated with one or more of the set of primitive functions.

14.   (Original)   The system as recited in claim 13, further comprising:

a primitive function calling mechanism adapted for calling one or more primitive functions associated with the one or more identifiers returned by the primitive function request mechanism.

15. (Original) The system as recited in claim 14, wherein the primitive function calling mechanism is associated with one or more of the set of components.

16. (Original) The system as recited in claim 13, wherein the one or more of the set of primitive functions replace one or more of the set of services when the set of services are determined to be inoperative.

17. (Original) The system as recited in claim 13, wherein the one or more identifiers associated with one or more of the set of primitive functions are returned in response to a primitive function request.

18. (Original) The system as recited in claim 13, further comprising:
state information associated with each of the set of components, the state information including data that enables the corresponding service to communicate with another one of the set of services.

19. (Original) The system as recited in claim 13, further comprising:
state information associated with each of the set of components, the state information including data that enables the corresponding primitive function to identify another one of the set of primitive functions with which to communicate.

20. (Original) The system as recited in claim 13, wherein the set of services and the set of primitive functions provide input and output functionality.

21. (Original) The system as recited in claim 13, wherein the set of services and the set of primitive functions provide keyboard functionality.

22.   (Currently Amended) A computer-readable medium for providing replacement functions for a set of system services, the computer-readable medium storing instructions thereon, comprising:

instructions for sending a request for ~~requesting~~ a primitive function from one of the set of system services to another one of the set of system services, the primitive function replicating the one of the set of system services in a manner such that implementation of the primitive function reduces or eliminates reliance on one or more system functions capable of becoming non-functional in the event of a system error ~~with reduced functionality~~; and

instructions for ~~sending~~ receiving an identifier associated with the requested primitive function ~~from~~ at the one of the set of system services from another one of the set of system services, thereby enabling the one of the set of system services to call the primitive function via the identifier associated with the requested primitive function.

[Please ADD claims as follows:]

23.   (New) An apparatus for providing replacement functions for a stack of system services, the stack of system services including one or more layers, each layer representing one of the system services, wherein lower layers provide services to upper layers in the stack, comprising:

means for sending a primitive function request for a primitive function down from a first one of the layers in the stack of system services to a second one of the layers in the stack of system services, the primitive function replicating the system service associated with the second one of the layers in the stack of system services in a manner such that implementation of the primitive function reduces or eliminates reliance on one or more system functions capable of becoming non-functional in the event of a system error;

means for returning primitive function information associated with the primitive function to the first one of the layers; and

means for storing the primitive function information to enable the first one of the layers in the stack of system services to communicate with the primitive function associated with the second one of the layers in the stack of system services.